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COMMERCIAL AGRICULTURE:

Cure or curse? Malaysian and
African experience contrasted

By Keith Boyfield
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Keith Boyfield is a Fellow of the Institute of Economic Affairs. He was educated at the London School of Economics where he won an SSRC scholarship to undertake research on the economic performance of state owned enterprises. He now runs a consultancy, Keith Boyfield Associates, based in the City of London, which advises a range of companies, non-profit organisations, inter-governmental bodies and media groups.

Keith is also the Africa Editor of *The Journal of World Economics*. He is a regular commentator on Al Jazeera and has also appeared on the BBC, Channel 4, Thames Television and Thomson Reuters. He is the author of over seventy studies on economic and public policy issues, and has also contributed articles to a wide range of international publications, newspapers and journals including the *Wall Street Journal*, the *Financial Times* and *The Times*.

Keith was previously Chief Economist and a Director of Leriba Limited, a pan-African intelligence consultancy. He was invited to act as the Rapporteur for the inaugural African Banking Roundtable for Central Bank Governors held in Washington DC, sponsored by the Central Bank of Nigeria and the Commonwealth Business Council.

This report is based on extensive field research undertaken in Gabon, Nigeria, Togo and Malaysia, including Sabah and Sarawak in Borneo.

Summary

- After many years of flat-lining, world food prices rose dramatically in the last years of the first decade of the twenty-first century. This applies to all the major world foodstuffs and the impact has been felt especially by the poor.
- Increases in the world's population and improvements in living standards are likely to put further pressure on food prices in the coming decades.
- An important potential solution to this problem is efficient, large-scale plantation agriculture which is feasible for crops such as soya, palm oil and sugar. Such agricultural practices often come under attack from NGOs.
- In recent decades there has been a stark contrast between the failure of plantation agriculture in Africa and the success in Asia – especially in Malaysia and Indonesia. Half a century ago Nigeria was the world's largest exporter of palm oil whereas today it is the world's 24th largest producer. In Malaysia, however, responding to strong market demand, the cultivation of oil palm trees rose from 46.2 per cent of all cultivated land in 1990 to 77.4 per cent by 2009. Nearly three-quarters of oil palm estates in Malaysia are privately owned.
- The palm oil industry in Malaysia has a good record with regard to sustainability. Large agribusinesses are able to access capital for long-term investment and they finance a wide variety of environmental schemes. Whilst the state does not adopt an entirely non-interventionist approach, the basic preconditions for

developing a successful business economy in this field exist in some Asian countries: property rights are reasonably well defined, as well as enforced, and the rule of law broadly prevails.

- Currently, palm oil productivity in Nigeria is about one third of the global average and 80 per cent of all production is via smallholders. Yet, there are indications that the Nigerian government is freeing up land ownership rules and opening up the agricultural sector to foreign investors. There are also positive developments in other African countries.
- Since 2008, governments across the equatorial region of sub-Saharan Africa have awarded concessions totalling 1.5 million hectares for commercial oil plantations. Meanwhile, investors are looking to negotiate a further 1.3 million hectares for oil palm cultivation. Wilmar, Asia's largest agribusiness and the world's largest processor of palm oil by volume, announced in August 2012 that it was prepared to invest substantial sums in Africa as a means of meeting global demand. Wilmar has acquired 50,000 hectares of oil palm plantations in Ivory Coast, Uganda and Ghana. It has also now commenced a programme to develop palm oil plantations in Nigeria. These developments are not entirely free from inappropriate government intervention but they do represent progress.
- Where there is government intervention in agriculture, it should be supportive of private business rather than directing it. In particular, it is important that business can work in a stable legal environment with well-established property rights in the relevant forest areas so that long-term investment can take place. The pace at which we may witness a renaissance in the West African agricultural sector will hinge on the willingness and ability to tackle the present barriers to efficient production. In Nigeria, this means tackling corruption and unwieldy bureaucracy as well as ensuring that property rights are observed.

Introduction

According to UN estimates, nearly 870 million people worldwide go without enough food every day. The vast majority of the world's hungry (852 million) live in developing countries. Whereas countries in Asia and Latin America have made good progress in eradicating extreme poverty and hunger, certain countries within sub-Saharan Africa are struggling to address these issues. Increases in the price of many foods, coupled with the global economic downturn since 2007, have hit some African countries especially hard.

This paper identifies plantation agriculture as a key tool to address the problem of food insecurity and malnourishment in developing countries. As this study outlines, the post-colonial experience in Malaysia could provide lessons for other countries seeking to foster their agricultural sectors.

One problem that needs to be resolved is that of ill-defined property rights and the need to involve local communities in the development of new agricultural initiatives. Unfortunately, campaigning NGOs, suspicious of large-scale economic development, are often not helpful - though their claims that existing property rights are overridden should not be ignored.

While the plantation sector has to address concerns relating to reinvestment, with respect to new planting the key challenge is to identify and develop new areas for cultivation. Ironically, Malaysia's strict environmental protection laws encourage plantation farmers to not only improve yields on existing sites but also to find new

locations. Increasingly, this may signal a major new opportunity for countries in the equatorial belt of sub-Saharan Africa.

For sub-Saharan Africa as a whole it is estimated that there are 250 to 300 million hectares suitable for the production of food crops. However, only 183 million hectares are currently under cultivation and most of this land is farmed with productivity levels that are a fraction of those achieved in advanced economies. Furthermore, inadequate storage facilities remain a major problem. Nigeria has the greatest agricultural potential within the West African region, but the agri-business sector has not thrived. The Federal government estimates that the country has 84 million hectares of arable land ready for development, yet only 40 per cent are currently used¹.

Private enterprise must be allowed to flourish if an efficient agricultural sector is to be attained. A diverse agricultural sector may well involve smallholders, co-operatives and big businesses, given that each brings their own relative advantages to different parts of the supply chain: large-scale concerns can then buy the raw input from local farmers and process and brand the finished products. The onus is therefore on smaller-scale producers to co-operate with the major agribusiness suppliers in the planting, processing and distribution of their products. Such developments are mutually rewarding. Local farmers benefit from best practice and technology transfer. The wider availability of fertilisers and other inputs represents a form of technology diffusion. For this to happen, the basic preconditions for a market economy must exist.

If permitted, plantation agriculture offers a mechanism to address the problem of food scarcity and to lift many millions of people out of poverty and malnutrition.

1 'Investing in Nigeria's Agricultural Value Chains', Akinwumi Adesina, Minister of Agriculture and Rural Development, presented at the Bank of Industry's Nigerian Investment Forum, London, 30 July 2012.

Food shortages and price rises

In August 2012 the World Bank's *Food Price Watch* reported that global food prices had risen by 10 per cent in July compared with the previous month. Commenting on this escalation in prices, World Bank President Jim Yong Kim observed: 'Food prices rose again sharply threatening the health and well-being of millions of people. Africa and the Middle East are particularly vulnerable, but so are people in other countries where the prices of grains have gone up abruptly.'²

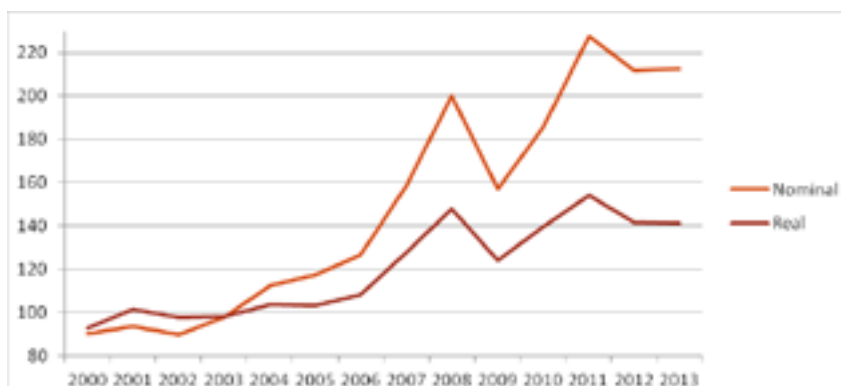
Clearly, there is pressure on food prices caused by a growing population and rising incomes. This has been exacerbated by increasing demand for meat as Asian consumers become more prosperous. In addition, there is a supply problem attributable to volatile climatic conditions in the USA, Argentina, Ukraine and Russia.

As shown in Figure 1, between 2002 and 2011, world food prices increased dramatically (see FAO, 2013). In 2012, the price of maize (corn) surged to its highest ever recorded level. This surge was partly driven by a substantial element of stockpiling by market traders, and exacerbated by government subsidies and regulations promoting bio-fuels, especially in the USA.

2 'Severe Droughts Drive Food Prices Higher, Threatening the Poor', World Bank press release, 30 August 2012.

It is estimated that approximately 40 per cent of maize grown in the USA is now used to make ethanol for blending purposes.³

Figure 1: Rise in world food prices, 2000 - 2013⁴



Source: FAO (2013)

Another key agricultural commodity is soya beans. As with maize production, the soya bean crop has been hit by poor harvests in the USA and South America. Consequently, soya bean prices hit record highs in August 2012 (US\$623 per ton) – a steep climb from the position in February 2010 when prices had fallen to US\$445 per ton.⁵

Cereals, as well as oils and fats, have shown particularly marked price increases in the last few years. The index for cereals averaged 174 in 2009 whereas in August 2011 it reached 252. Similarly, the index for oils and fats recorded an average of 151 in 2009 but, by July 2011, it had moved above 253. It has subsequently remained at levels above 200, although there was a marked reduction in the index over the second half of 2012 due to lower demand for animal

3 'Soaring corn stirs up calls to curb ethanol', *Financial Times*, 19 July 2012.

4 Note: The FAO deflates the data series not by a global consumer price index, nor a GDP deflator, which would be of dubious accuracy, but by the World Bank Manufactures Unit Value Index. This is a proxy for the price of developing countries' imports of manufactures in US dollar terms. In effect, it is a measure of the terms of trade between agricultural and industrial goods.

5 See: www.indexmundi.com/commodities

fats and vegetable oils arising from the economic downturn experienced in Europe and the USA and from slower growth in China.

High food prices threaten to cause significant suffering among many of the world's poor. The volatility observed in recent years raises the issue of how far these observed surges in agricultural commodity prices are permanent? What policy options can be adopted to address increases in prices and what, if anything, can be done to reduce volatility? More specifically, to what extent can large-scale commercial agriculture meet demand for key foods and oils, and is it the best system for producing food? Furthermore, if large-scale agriculture is the best way forward, how can it be ensured that the industry is able to thrive in less developed countries?

An answer to the emerging global food insecurity dilemma: plantation agriculture

How should we respond to this worsening food crisis? Collier (2010) points out that cheap food will become more important because the poor will increasingly cease to grow their own. Collier suggests that we need more commercial agriculture: in practice this means more large farms.

Indeed, large-scale commercial agriculture is a key tool with which to feed the world's population, which is likely to grow from 7 billion to 9.3 billion people by 2050. An important aspect of this market response is plantation agriculture which offers the means to produce sufficient quantities of cereals, pulses and vegetable oils along with feedstuffs for livestock, taking advantage of economies of scale as well as higher investment in seed varieties, fertiliser, mechanised harvesting equipment and so on.

A dozen key foods and oils provide the essential diet for most of the world's population. They are: maize, rice, wheat, soya bean, potato, palm oil, cassava, plantain, sugar, sorghum, sweet potato and yam. Not all of these staple crops lend themselves to plantation

agriculture.⁶ However, palm oil, soya bean and sugar, for example, afford significant potential for commercial large-scale farming. The opportunities as well as the challenges associated with plantation agriculture are well illustrated by the contrasting experience of two former British colonies, Malaysia and Nigeria.

6 For a further detailed discussion, see Boyfield (2013).

The importance of plantation agriculture: the Malaysian experience

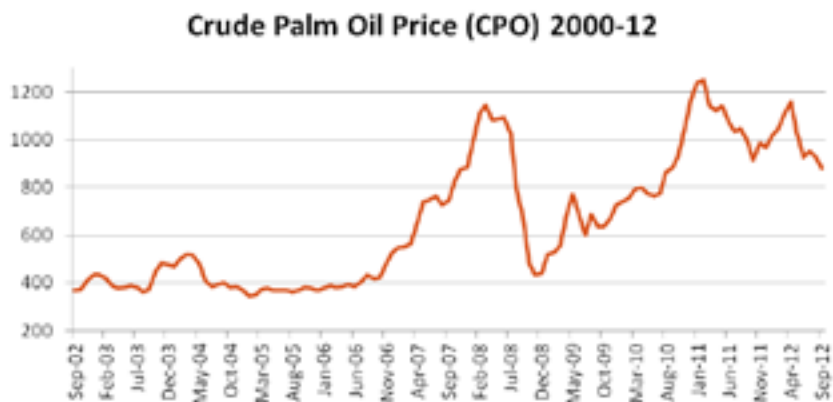
Plantation agriculture offers an important means to produce the commodities that are experiencing far greater worldwide demand. The opportunities of doing so successfully and profitably are well illustrated by the experience of cultivating oil palm trees in Malaysia. Interestingly, the success achieved by Malaysian plantations stands in direct contrast to the experience of West Africa, where the commercial cultivation of oil palm trees, most notably in Nigeria, has been sadly neglected - to the substantial detriment of the national economy. It is striking that half a century ago, when Nigeria gained independence from the UK, it was the world's largest exporter of palm oil⁷, yet today it spends US\$435 million a year on importing palm oil from overseas. If this was a result of changing trade patterns and a shift of comparative advantage in a vibrant market economy, this would not be a cause for concern. However, it is not.

7 For further details see 'The Nigerian Palm oil Industry: What went wrong and the Way Forward: Part 1', www.vanguardngr.com, 16 April 2012. In the 1950s, Nigeria accounted for over 40 per cent of global output. Furthermore, when the country won independence from British colonial rule in 1960, palm oil contributed 82 per cent of national export revenue.

In contrast, Malaysia, which gained independence slightly earlier, was a relatively modest exporter of palm oil in the late 1950s. Yet a strategic decision by the Malaysian government to switch from cultivating rubber and other commodities such as coconuts in favour of palm oil has generated immense economic benefits and raised many millions of Malaysian citizens out of poverty. This is not to applaud a government strategy of ‘picking winners’ in general – there are many countries that tried to do the same in the mid-to-late twentieth century with disastrous results. However, it is notable that a shift to palm oil production has had substantial benefits as far as poverty reduction is concerned.

Oil palm plantations are a more lucrative crop to cultivate than other staples because oil palm has so many alternative uses such as food, soap, detergent and biofuel. The myriad uses that can be made of oil palm and its main product – palm oil - have contributed to its buoyant price on the world’s commodity markets, which is illustrated in Figure 2.

Figure 2: Palm oil prices, 2000–2012



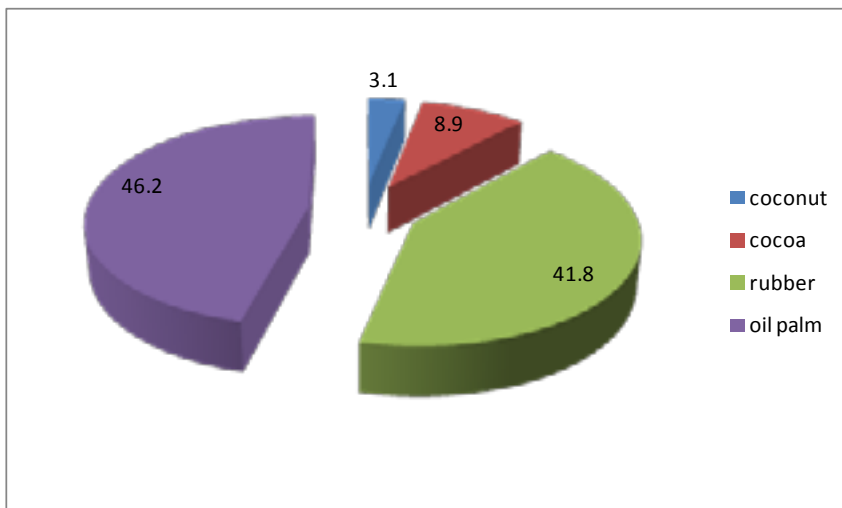
Source: US Department of Agriculture (2012)

Palm oil provides a relatively cheap and healthy source of nutrients for the world's population, particularly for the poorest. Demand for palm oil has more than doubled since 2000 and in 2011 world palm oil and palm kernel oil production amounted to 55.8 million tonnes, equivalent to 31 per cent of the total worldwide production of the most important oils and fats.

Oil palm trees were originally introduced to Malaysia by the British as far back as the 1870s, in order to enhance the appearance of colonial settlements. It was only around the time of the World War I that oil palm began to be grown on a commercial basis as a cash crop. Demand for palm oil as a lubricant for steam engines and other mechanical equipment led plantation concerns such as Sime Darby and Guthrie to convert from rubber to oil palm. By the time of the World War II, there were around 20,000 hectares of oil palm under cultivation (Malaysian Palm Oil Council, 2008: 4). But it was really only after independence that Malaysia forged ahead with investment in oil palm, converting plantations of coconut, rubber and other commodities.

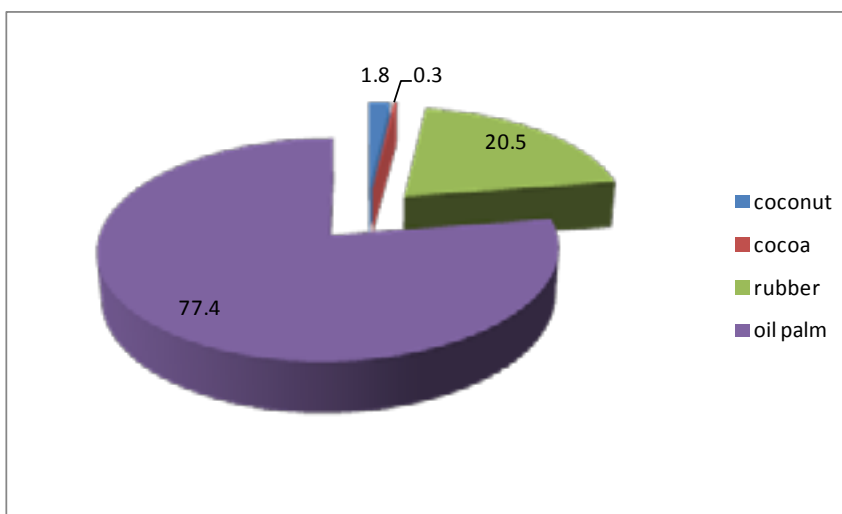
In 1990 the percentage of cultivated land in Malaysia given over to rubber plantations was 41.8 per cent out of 4.57 million hectares; this had fallen to 20.5 per cent out of 6.06 million hectares by 2009. Similarly, the share of land under cocoa cultivation had fallen from 8.9 per cent to 0.3 per cent, while plantations centred on coconut production fell from 3.1 per cent to 1.8 per cent (see Figures 3 and 4 and the sources quoted). The cultivation of oil palm trees rose from 46.2 per cent of all cultivated land in 1990 to 77.4 per cent by 2009 – an increase which underlines the commercial attractiveness of palm oil and its derivatives as a flexible and sought-after commodity.

Figure 3: Land use in Malaysia: per cent of commercially cultivated plantations used for main tree crops, 1990



Source: Malaysian Ministry of Plantation Industries & Commodities (2010)

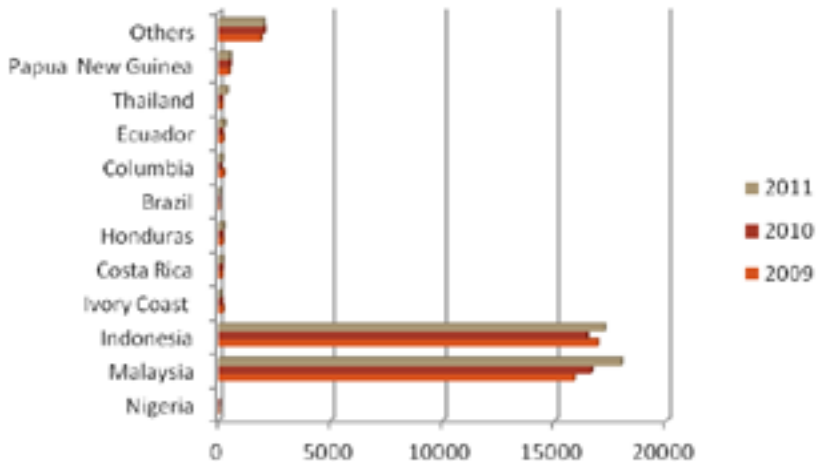
Figure 4: Land use in Malaysia: per cent of commercially cultivated plantations used for main tree crops, 2009



Source: Malaysian Ministry of Plantation Industries & Commodities (2010)

As well as in cultivation, a growing number of concerns began to invest in refining and processing capacity. By 2004, Malaysia had become the largest producer and exporter of palm oil in the world, accounting for 11 per cent of global production and a quarter of worldwide exports by value. In terms of planted area, private companies accounted for 60 per cent of oil palm estates in 2009 while central government and state schemes represented a further 27 per cent, and independent smallholders made up the remaining 13 per cent. Malaysia and Indonesia now account for over 90 per cent of the world export market in palm oil (see Figure 5).

Figure 5: Palm oil exports, world rankings, 2009-2011



Sources: Oil World Annual (2011) and Oil World Database (2012)

However, oil palm plantation concerns in Malaysia now face two major problems: a lack of land for expansion and the need to reinvest in existing plantations. In a recent report on the industry Standard Chartered Bank estimated that 'more than 20% of oil palms in Malaysia are already over 25 years old, after which yields plummet and trees generally have to be replanted' (Ofon and Lee, 2012: 2).

Furthermore, Standard Chartered Bank found substantial evidence 'to suggest that a large proportion of estate owners in South East

Asia have underinvested in their estates, largely to limit overheads costs. Yields have been adversely affected as a consequence.’ What explains this widespread underinvestment? The answer would appear to lie in the intense competition evident in the vegetable oil sector, particularly among the smaller growers of oil palm. They do not enjoy anywhere near the same economies of scale reaped by major plantation companies in terms of the ability to offset a loss in production revenues as new plantations take up to five years to yield a crop. The larger agri-business companies appear to be able to manage sustainable investment programmes much more effectively than the smaller suppliers often romanticised by NGOs.

Agribusiness, efficiency and sustainability

There are a number of major agribusiness firms that provide a model for the large-scale commercial development of crops such as oil palm. United Plantations Berhad (henceforth referred to as United Plantations), quoted on the Danish stock exchange as well as in Kuala Lumpur, is one of them, while others include Sime Darby and IOI Group. These companies maintain the highest standards with respect to oil palm cultivation and processing. United Plantations, for example, is acknowledged as setting exemplary standards, not just in terms of plantation management and the refining and processing of palm oil kernels and oil, but also in the accommodation of its workers on plantations and the provision of educational and health services for them. It has also launched a biodiversity project with Copenhagen Zoo in Denmark. Companies such as United Plantations set the international benchmark for productivity and the development of disease-resistant palm trees. Larger companies also work hand-in-hand with independent smallholders, because palm oil must be processed within a few days of harvesting, otherwise it deteriorates rapidly. Consequently, smallholders look to the larger concerns for processing facilities, or combine with other smallholders to form a co-operative which then processes the raw materials that are harvested.

The environmental record of palm oil agribusiness in Malaysia and Indonesia is frequently criticised by NGOs. In campaigns such as the video *Nestle Killer - Give the Orang-utan a Break* - Greenpeace claimed that palm oil plantation owners were directly responsible for the supposed potential extinction of this ape. Friends of the Earth have also launched a number of attacks on the industry along with the World Wildlife Fund.

Certainly, some loss of forest and wildlife habitat has occurred as a result of the expansion of agriculture, including oil palm, in Malaysia, but the extent of this loss appears to have been exaggerated. The majority of palm oil plantations⁸ are located on the Malaysian mainland peninsula - nowhere near the states of Sabah and Sarawak on the island of Borneo where the Borneo orang-utans are to be found. In fact, the populations of Borneo orang-utans in Malaysia have remained relatively stable in recent years.

Over 50 per cent of Malaysia's land area remains under forest cover and many areas are given full protection against logging. In the 1990s, there was certainly a loss of wildlife habitat along the East Coast of Sabah, but this trend has been arrested and much has been done to make sustainable forestry management a reality. Indeed, Datuk Sam Mannan, the Director of Forestry in Sabah, observes: 'Oil palm has been the crop that allows us to multiply our forestry conservation programmes as, indirectly, it subsidises our efforts and allows the government to carry on with its socio-economic development without being dependent on timber anymore.'⁹ 'For my money', he adds, 'no other crop has dramatically lifted so many people in Sabah from the abyss of extreme poverty, except palm oil.'¹⁰ Palm oil production provides an economic activity that is a sustainable alternative to timber harvesting because the opportunity cost of timber harvesting (lost palm-oil production) is higher.

8 The precise breakdown of plantation area is 2.49 million hectares in Peninsular Malaysia (53 per cent of the total); 0.84 million hectares (18 per cent of the total) in Sarawak; and 1.36 million hectares, (29 per cent of the total) in Sabah (Malaysian Palm Oil Council/Malaysian Palm Oil Board, 2007: 23).

9 'The Oil Palm Industry of Sabah: The Good, The Bad and the Ugly', a speech delivered at the Global Roundtable on Sustainable Palm Oil held at the Sutera Harbour Resort, Kota Kinabalu, 24 November 2011.

10 Ibid.

Palm oil also increases incomes, making environmental goods relatively more valuable to the local population and their protection possible.

Major palm oil producers such as Sime Darby are prominent sponsors of many conservation initiatives. In 2008, for example, the company endowed RM 25 million (equivalent to £5.5 million as on 1 May 2013) to the Sabah Forestry Department in order to restore 5,000 hectares of degraded forests in Ulu Segama for the express benefit of the local wild orang-utan population. Sime Darby also supports rhino conservation efforts and other rare species programmes in Sabah. Meanwhile, United Plantations is funding an ongoing programme with Copenhagen Zoo to develop a new Biodiversity Department which has a remit to advise the whole group of companies on appropriate conservation policies and practices. In addition, Wilmar, through its support for PPB Oil Palm at Lahad Datu in Sabah, has helped restore some 300 hectares of riparian forests for the benefit of the endangered proboscis monkey.

In recent years key conservation measures have included the implementation of Reduced Impact Logging (RIL); the launch of the Sustainable Forest Management (SFM) initiative in 1997; the certification of the first tropical forest at Deramakot under the Forest Stewardship Council (FSC), and the establishment of the Ulu Segama-Malua (USM) for orang-utan conservation in 2007.

These are concrete achievements although it is important to be aware of the point made by Nobel Laureate Elinor Ostrom (1990, 2005, 2012) who drew attention to the need to distinguish ‘rules-in-forms’ from ‘rules-in use’. Ambitious objectives set out in government edicts do not necessarily translate into implementation at ground level: rules are fulfilled through adequate funding and practical application at the local level. Ostrom’s contribution to the debate was to demonstrate how local communities can themselves devise bottom-up solutions to define the rules for using common-pool resources as well as develop appropriate monitoring mechanisms that do not clash with local customs or traditions. As she emphasises in Ostrom (2012): ‘It isn’t that there is a single set of rules that will

work in all places in a particular society.’ Ostrom rightly warned against what she termed the ‘panacea trap’.

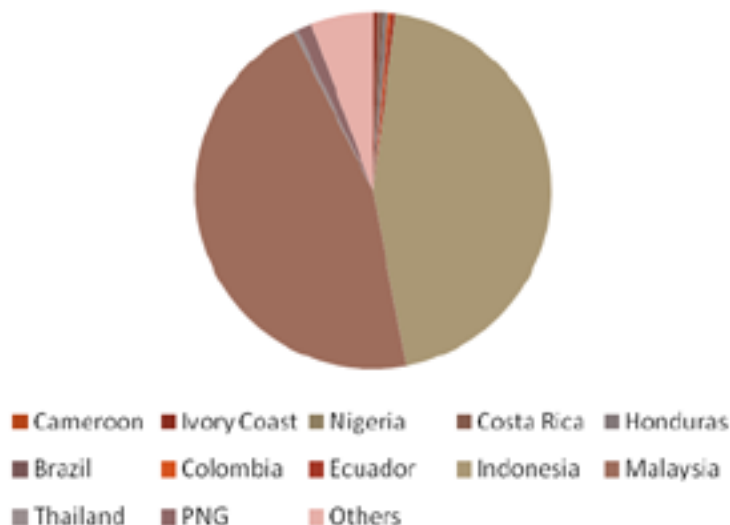
However, to conclude this section, real progress does appear to have been made in Sabah. Significantly, the government does not have the authority to arbitrarily direct land use changes: everything must be done through legislation and public debate. Short-term licences to log forests have been phased out as they fall noticeably short of sustainability objectives. The population of wild orang-utans in Sabah is closely monitored and conserved by a group of wildlife conservation bodies as well as the Malaysian government (an example of Ostrom’s recommended polycentric approach in action). Furthermore, voluntary groups along with the government’s Wildlife Department, support an orang-utan rehabilitation centre located in the 4,300 hectare Kabili Sepilok forest reserve in Sabah. This now attracts over 30,000 visitors a year from 30 different countries. Significantly, the orang-utan population appears to be increasing once again and the number of displaced and orphaned orang-utans rehabilitated by the centre has stabilised.

The West African experience: a stark contrast

The experience in West Africa has been in stark contrast to that of Malaysia. Of course, West African governments should not actively promote oil palm plantation agriculture. A general strategy of government-promoted development rarely works. In Malaysia, albeit through government-determined development priorities, the private sector has made the running, backed up with an institutional environment that ensures that its investments are free from predation.

Nigeria currently exports a mere 18,000 metric tons of palm oil (2012 estimates) and is 24th in the global rankings of exporters. Significantly, two other countries where oil palm trees are native – Cameroon and Togo – also languish at the bottom of the rankings (see Figure 6).

Figure 6: Palm oil exports by country ('000 tonnes), 2010.



Source: <http://www.indexmundi.com>

Since Nigeria discovered crude oil in the early 1960s, attention has primarily focused on hydrocarbons, which currently earn over 95 per cent of the country's export revenues.¹¹ There were repeated attempts by political leaders to promote investment in the agricultural and plantation sectors in the 1970s, but they failed. As Peter Osalor observes: 'Several attempts to establish large-scale plantations since the 1960s – including the Cross River State plan and the Oil Palm Belt Rural Development Programme – ended in miserable failure.'¹²

¹¹ *The Economist*, 13 April 2013.

¹² See: 'The Nigerian Palm oil Industry: What went wrong and the Way Forward – Part 1', www.vanguardngr.com, 16 April 2012.

Problems confronting West Africa

Before oil exports took off, agriculture accounted for over 60 per cent of Nigeria's GDP and agricultural commodities were the country's main exports. In fact, West Africa has a long history of cultivation of oil palm trees. In 1884, the British National Africa Company created a monopoly to export palm oil – the main crop harvested from oil palm trees - from the Niger River region. However, the agricultural sector has declined and Nigeria's infrastructure deficiencies seriously inhibit the sector. Road networks are crumbling (literally); there is a lack of reliable power; and an absence of storage facilities.

Attempts to revive agriculture, such as President Goodluck Jonathan's Agricultural Transformation initiative¹³ embrace the private sector, use market mechanisms, and involve the government stepping back from direct intervention in the market. For example, the government has removed restrictions on areas of investment and the maximum equity ownership in investments by foreign investors. Currency exchange controls have been lifted, tax holidays have been established for pioneer agricultural investments and new constitutional protections have been introduced which offer a range of guarantees against nationalisation or expropriation (although the history of Africa suggests that such guarantees may be ignored by future administrations). The government has also discontinued its former role in the procurement and distribution of inputs such as fertiliser. Adesina observes: 'We were subsidising corruption; we were not subsidising farmers.'¹⁴ After a major shift, it is the private sector which now sells seed and fertiliser directly to farmers. The Federal government is, however, setting up marketing corporations to co-ordinate production, investment programmes and agricultural standards, though these will be run as private sector led organisations. While there is still an emphasis on government subsidies to the farming community as opposed to letting free markets function, the agricultural sector appears to be heading in the right direction.

13 Ibid.

14 Ibid.

Given the high level of unemployment in Nigeria (estimated at 24 per cent in 2011) and the extent of under-used land and resources, it is understandable that there is now a concerted move to try and re-energise Nigeria's lacklustre agricultural sector, which for years has been largely unable to compete. Years of neglect mean that radical action is necessary.

Nigeria still has around 350,000 hectares of oil palm plantations, but inefficient production methods have meant that output in recent decades has proved disappointing. Yields can be as low as 1.5 tonnes per hectare per year, far below the global average of 4.13.

Thompson Ayodele of the Initiative for Public Policy Analysis (IPPA), a think tank based in Lagos, argues that misconceived government policies pursued in the 1960s - centred on a marketing board that set regulated prices for agricultural commodities such as palm oil - were highly damaging. Also, historically, due to low levels of mechanisation, the large-scale oil palm plantations found in Africa have used up to 30 times more employment per unit area than other major agricultural plantations, such as rubber, sorghum or soya beans. A recent World Bank consultation paper points out that around 80 per cent of Nigeria's palm oil is produced by smallholders, many of whom rely on rural women who have traditionally pounded the palm oil fruit into the oil product as well as brought the product to market (World Bank/IFC, 2011: 14). Significantly, Nigeria is now able to point to a new wave of locally developed manufacturing technologies that have radically improved efficiency, lowered average processing costs and boosted profitability.

The development of a whole new generation of efficient and reliable machines designed for small-scale producers has led to a transformation in productivity levels. This trend has been accompanied by a switch to more productive hybrid seedlings capable of matching the best results achieved anywhere in the world. A project undertaken by the Nigerian Institute for Oil Palm Research (NIFOR) has shown that yields as high as four tonnes per hectare can be achieved from plantations located in Nigeria.

Nonetheless, there remains a huge divide between family farms and plantation agriculture in Africa. Nigeria would benefit from analysing the Malaysian experience to understand the institutional conditions necessary for developing highly productive palm plantations, free of disease. There are encouraging signs, notably with respect to the willingness of major agribusinesses based in the Far East to invest in Equatorial Africa. This opportunity for developing higher productivity methods comes at a time when demand for palm oil is still high and, as such, Malaysian and Indonesian palm oil producers are running out of a key factor of production: land.¹⁵

¹⁵ This is partly because of environmental protection: at least half the total land in Malaysia is given over to forests with no agricultural activity.

A new wave of investment in Africa

Equatorial Africa is one of the few places in the world with sufficient amounts of land that is both available and suitable to cultivate the hectares of oil palm that are required to meet world demand. Having confronted obstacles to expansion in their domestic markets, Malaysian and Indonesian plantation concerns have begun to look overseas, notably on the African continent. As a result there is a new wave of capital seeking to invest in sub-Saharan Africa, with more than US\$6 billion pledged in terms of foreign direct investment in the oil palm sector of West Africa alone. In February 2011, for example, Sime Darby, the world's largest publicly quoted palm oil producer, announced a proposed investment in a 300,000 hectare plantation in Cameroon; this follows the completion of a deal involving a 220,000 hectare concession on a 63-year lease awarded in Liberia in 2010. Other major investors in new plantations include Wilmar International, which recently acquired a plantation from Unilever in Ghana; the Singapore-listed Golden Agri Resources; and Olam International, also listed in Singapore, which has concluded an agreement to develop a joint venture in Gabon.

Since 2008, governments across the equatorial region of sub-Saharan Africa have awarded concessions totalling 1.5 million hectares for commercial oil plantations. Meanwhile, investors are looking to negotiate a further 1.3 million hectares for oil palm cultivation.

Wilmar International, Asia's largest agribusiness and the world's largest processor of palm oil by volume, announced in August 2012 that it was prepared to invest substantial sums in Africa as a means of meeting global demand, not least from China, for this commodity: 'I'm prepared to invest hundreds of millions of dollars in Africa. The time for that continent has come', observed Kuok Khoon Hong, Wilmar chairman and chief executive, at a recent earnings briefing.¹⁶

Wilmar has acquired 50,000 hectares of oil palm plantations in Ivory Coast, Uganda and Ghana. In 2011, it acquired a 77 per cent interest in a palm oil company listed on the Ghanaian stock exchange and previously owned by Unilever. It has also now commenced a programme to develop palm oil plantations in Nigeria. Wilmar's CEO says: 'The major area we are going into is Nigeria.' Nigeria probably has the greatest potential with respect to plantation agriculture, yet it is the country with the worst record for maintaining and enhancing its agricultural base over the last half century.

16 'Wilmar to deepen investment in Africa', *Financial Times*, 15 August 2012.

Table 1: Publicly listed palm oil producers operating in sub-Saharan Africa

Company	Market Cap US \$ million	Location of Activities	Significant shareholders	Stock Exchange
Equatorial Palm Oil Ltd	34.8	Liberia	Siva Group 26.7%	AIM, London
Feronia Inc.	55	DRC	Siva Group 8.6%	Toronto
Presco Ltd	54.7	Nigeria	SIAT Group 60%	Lagos
Okuma Oil Palm PLC	66.8	Nigeria	SOCFINAF 62.7%	Lagos
Okitpupa Oil Plam	2.84	Nigeria	Estaport Farms, Ondo State Investment Holding Co	NSE
Benso Palm Oil Plantation Ltd	36.4	Ghana	Wlimer International	Accra, Ghana
SocFinaf	452.8	Cote d'Ivoire, Nigeria, Cameroon	SocFin 61%	Luxembourg
PALMCI	318.6	Cote d'Ivoire	SIFCA 50%, Nauva Investment 50%	BRVM d'Abidjan
SOGB	106.7	Cote d'Ivoire	SOCFINAF 63.5%	BRVM d'Abidjan
TOTAL	1,129			

Source: Hardman & Co

As Hardman & Co highlight in an analysis of the agricultural potential of sub-Saharan Africa, the oil palm sector is potentially a major industry for the West African region, and it has the capacity to be a cornerstone for the development of capital markets in the region as well. Table 1 details the geographical scope of publicly listed companies involved in the oil palm sector in sub-Saharan Africa. Market capitalisation is over \$1.1 billion and most of these companies are controlled by international groups.

The challenges facing West Africa

It is estimated that the finance needed to develop one hectare of oil palm plantation in West Africa is in the order of \$6,000–\$8,000. How far Nigeria can revive its oil palm sector hinges in part on the willingness of government – both federal and state – to tackle the present barriers to efficient production. These include poor infrastructure (which could be improved through private sector finance), an erratic power supply (again, the private sector could take the initiative if the institutional environment was right) and a corrupt and unwieldy bureaucracy. Furthermore, port facilities and warehousing need to be dramatically improved but, again, private enterprise could address these shortfalls if unshackled by federal and state government. Corruption and byzantine bureaucracy present immense barriers to private sector action in these fields.

Besides the logistical hurdles associated with the sheer scale of these developments, involving investments of hundreds of millions of dollars, there are also problems of disease, for example, the risk of palm trees contracting vascular wilt. Plantations in Malaysia and Indonesia have been able to tackle this disease through rigorous quarantine measures whilst, in Africa, control of the disease has proved effective by screening and breeding more resistant oil palms. Consequently, as long as technically competent management is recruited, the problem of disease can be contained.

Property rights: an obstacle to development

A greater obstacle to long term development is the problem of uncertain property rights and the use of community land. The issue of land entitlement has bedevilled economic development in Africa. As a factor of production, land is relatively plentiful, but land ownership tends to be a hotly contended issue. This controversy is discussed at length by de Soto (2000). He points out that, in many parts of Africa, most individuals' assets and resources are commercially and financially invisible. There is a lack of any clearly recognised, legally binding guide to who owns what and where. Consequently, many individuals find that they are unable to raise capital because financial institutions require legally recognised titles to land as collateral. Furthermore, uncertainty about land title – and the possibility of predation by government – is a strong disincentive to private sector investment.

Recent experience suggests that disputes can arise when oil palm plantations are developed in areas where the local population claim traditional communal use. These disputes tend to catch the eye of the world's media. For instance, as Xan Rice reported in *The Financial Times* regarding the controversy surrounding Sime Darby's investment in an oil palm plantation in Liberia:

'[L]and ownership is complex and controversial in Liberia, with fuzzy lines between government land and communally owned land that has been used for subsistence farming for generations. When Sime Darby started clearing land to plant, local communities protested that their crops and sacred sites had been destroyed.'¹⁷

Under the rules of the Roundtable on Sustainable Palm Oil (RSPO), a certification body established to monitor environmental and social responsibility standards, its members, including Sime Darby, must obtain 'free, prior and informed consent' (FPIC) from the local population where new plantations are developed. In 2007 the United

17 'Palm oil producers face Africa challenges', Xan Rice, *Financial Times*, 23 September 2012.

Nations enshrined FPIC as part of its Declaration on the Rights of Indigenous Peoples. Yet no internationally agreed definition for FPIC has so far been adopted. It can be argued that it is one of the roles of government to ensure that there is a respected and legally recognised system of property rights that enables an agribusiness to lease agricultural land under a set of certain conditions which meet the interests of the freeholder and the local community. Uncertainty is a great problem for investors.

Arguments over land title raise a host of vested interests, particularly where employment opportunities are scarce. In the case of Sime Darby's operation in Liberia, development of the oil palm plantation was stalled while the company negotiated with local villagers over compensation for the disruption caused by the project. As a result, planting has fallen far behind target. To date, only 3,200 hectares of oil palm have been planted whereas the company's target envisaged carving out 10,000 hectares of new oil palm each year.

Agreement over land rights, which the company believed had been settled once it was awarded land by the government of Liberia, has now been achieved in return for the company offering to hire an additional six hundred full-time staff. However, as some observers point out, disputes over land rights are not straightforward and local communities' claims are sometimes suspect. There is always a temptation to cite FPIC in an effort to win further compensation. In the case of the Sime Darby project, new communications procedures with the local community have been implemented to ensure that further disputes are minimised. In a revealing observation, Carl Dagenhart, Head of Communications in Europe and Africa for Sime Darby concedes, 'We never realised land would be this painful to secure.'¹⁸

A further problem relates to indigenous peoples with traditional claims to land. In the past there have been instances – for example, in the Brazilian Amazon rainforest - where governments overlooked

18 Palm oil producers face Africa challenges', Xan Rice, *Financial Times*, 23 September 2012.

their claims to land since they had no formal land title. Unclear land rights and a lack of transparency can lead to considerable confusion. But there have also been instances of campaigning NGOs opposing development projects on the grounds of FPIC although the original land claims were tenuous at best and the disputes were characterised by inter-clan feuding. In recent years such episodes have occurred in Uganda, Indonesia and in Papua New Guinea.¹⁹ The authors of a recently published World Growth report argue that 'campaign organisations have subsequently used FPIC as a means to put the brakes on or halt half [of] completed development projects in poor countries.'²⁰

Meanwhile it should not be forgotten that, as the World Bank points out, when oil palm estates are established, compensation for lost land access can serve as a means of distributing the benefits of large scale agricultural production. For their part, the World Bank and the International Finance Corporation (IFC) urge the adoption of an 'effective broad based community participation in land use planning' to meet the challenges presented by the wide raft of issues triggered by proposals to create new and large scale agricultural plantations in the tropics. Here, the onus should be on working with development projects in a sustainable manner, rather than trying to block them, a move which stymies investment and denies local communities considerable employment opportunities.

The questions that need to be resolved commonly cover a multiplicity of issues. To begin with there can be a lack of clarity with reference to land and water rights. In turn, there may be an absence of, or subsequent confusion over, contractual arrangements relating to these rights. Matters can be complicated by the inability of local communities to negotiate effectively without professional expertise. But there is also the real risk that campaigning NGOs may take up FPIC disputes for their own ideological motives, as appears to have happened in Papua New Guinea.²¹

19 See: *How the Green Movement is Distorting Free, Prior and Informed Consent*, A World Growth report, June 2012, www.scribd.com/doc/97171664/Wg-Fpic-Webjun12-3.

20 Ibid.

21 Ibid.

The identification and transfer of property rights

In the case of plantation agriculture initiatives are underway in various countries with a view to attaining the economic benefits of plantation development. Paralleling these initiatives, the World Bank has sought to develop business models tailored to the particular requirements of specific countries, such as Papua New Guinea and Indonesia. The aim is to strengthen smallholder participation in the oil palm sector, maximising opportunities and benefits for smallholders, along with local communities and indigenous groups. In practice, most of these business models involve partnerships between larger plantations with mills and smallholders. Indeed, it can be argued that oil palm development invariably depends on independent smallholders' co-operation.

In the past, governments in sub-Saharan Africa have been tempted to launch ambitious major projects which then fail through lack of funding, a change in government policy or because the government has picked 'losers' rather than 'winners'. Indeed, the continent is littered with such 'white elephants' ranging from abandoned steel mills to defunct agricultural processing plants. The former colonial powers were also guilty of grandiose agricultural schemes, well-illustrated by the groundnut scheme in Tanganyika (now Tanzania) – see Myddelton (2007). This folly turned into a lesson on how not to support a major agribusiness scheme. Just about everything that could have gone wrong did go wrong with this project (wrong location, inadequate rainfall, poor soil, inadequate transport links, heavy-handed management) losing the British taxpayer over £1 billion in current prices according to Myddelton and turning the 50,000 acres of land cultivated for groundnut production into a dustbowl.

Experience gained in rural sub-Saharan Africa indicates that it is wise to encourage existing entrepreneurial activity to co-operate on such matters as processing with larger commercial plantations. The latter can buy the output of the former for processing and marketing. Furthermore, the larger concerns can provide finance for inputs such as fertiliser.

This model has been developed in Sarawak (and throughout Malaysia) where SALCRA – which is a local government agency – has issued 5,069 land titles. As of February 2012 there were nearly 17,000 landowners participating in the scheme. Table 2 shows that the number has continued to increase and the total number of participating landowners, according to official data, now totals 22,537.

Table 2: Breakdown of participating farmers in SALCRA schemes

Regional division	Existing Landowners	New Landowners	Total
Kuching	4,722	253	4,975
Samarahan	4,927	905	5,832
Sri Aman	3,267	390	3,657
Betong	3,899	1,263	5,162
Sibu	0	911	911
Miri	0	2,000	2,000
Total	16,815	5,722	22,537

Source: SALCRA (briefing document, 25 April 2012)

SALCRA has also spearheaded a move to develop native customary rights land into commercial plantations. SALCRA provides funding, training and technical advice to local farmers who have diversified into establishing transport and logistics operations as well as small-scale packaging units. There is room for debate about whether this is an appropriate role for government. However, this role involves working with the grain of local entrepreneurial initiative and the promotion of stable property rights rather than centrally planning land use.

Where there is government intervention, schemes aimed at unlocking the entrepreneurial skills of local farmers and their suppliers are to be encouraged. In this context one can derive valuable guidance from the work of Elinor Ostrom and her research into ‘bottom-up’ solutions to common-pool resource problems. As Ostrom (2012) stresses, the key is to foster high levels of trust and reciprocity in systems of ownership and governance. What is to be shunned, as Mark Pennington in his commentary on Ostrom (2012) points out, are attempts to impose individual property rights in a top-down way where collective private property rights may already exist. Attempts to impose government ownership and regulation are also to be avoided. There are far too many examples in sub-Saharan Africa where such initiatives have resulted in disastrous repercussions. As Pennington highlights: ‘where basic norms emphasising the protection of individual property rights do not exist, (they) have resulted in rampant corruption and cronyism as ruling elites have sought to grab access to resources for themselves and their political and tribal allies.’²² Perhaps even worse is the lamentable catalogue of cases, for example in Tanzania under President Nyerere²³ or in Zimbabwe under President Mugabe²⁴, where the state has owned and managed natural resources, mines and plantations.

22 See also Van de Walle (2001).

23 Under President Nyerere 90 percent of Tanzania’s farmers were moved to collectives. In 1961, Tanzania was the largest food exporter in Africa; following collectivisation, completed in 1976, Tanzania had to import no less than half the food its citizens consumed (see Rydenfelt, 1986).

24 Zimbabwe’s recent economic woes are sadly well known. Following the confiscation of many privately owned farms by the state in the period 2000-2008, inflation reached 6.5 sextillion percent in mid-November 2008, see Hanke and Kowk (2009).

Conclusion

Global food prices have risen significantly in the last few years. The UN FAO Food Price Index has climbed from 156.9 in 2009 to 212 in March 2013. Furthermore, the world's population is forecast to grow from 7 billion to 9.3 billion by the middle of the century. This will put even greater pressure on the demand for staple foods. Plantation agriculture offers a crucial vehicle to meet this global rise in demand. The opportunities and challenges associated with plantation agriculture are well illustrated by the contrasting experience of two former British colonies, Malaysia and Nigeria.

Malaysia has attracted criticism from a number of non-governmental organisations (NGOs) who accuse the industry of destroying large tracts of primary rain forest, endangering wildlife – notably orang-utans – and impoverishing the indigenous community in remote rural locations. The evidence indicates that these accusations are exaggerated and that the industry has, in fact, done much to support wildlife conservation efforts. Since it is such a high yielding crop, oil palm plantations contribute to the maintenance of biodiversity. Other crops would require far more land.

Some African countries, such as Nigeria, have turned from being important producers of palm oil to being net importers. This is not because Nigeria has been a successful trading country exploiting its comparative advantage in other areas, but because of the poor business environment which affects every sector of the economy. More generally, whilst the palm oil industry has languished in Africa it has boomed in Asia. In Malaysia, for example, stable property

rights and a reasonable business environment have led to a huge expansion of the palm oil industry to the point where the shortage of land is the main constraining factor.

African countries could learn from – and, indeed, improve upon – the policies adopted in Asia. Where there is government intervention, it should be supportive of private business rather than directing it. In particular, it is important that business can work in a stable legal environment with well-established property rights in the relevant forest areas so that long-term investment can take place. Over \$6 billion has been pledged in foreign direct investment in the oil palm sector of West Africa alone. But the pace at which we may witness a renaissance in the West African agricultural sector will hinge on the willingness and ability to tackle the present barriers to efficient production. In Nigeria, this means tackling corruption and unwieldy bureaucracy as well as ensuring that property rights are observed. There is also an urgent need to address the problems of an erratic or non-existent power supply and inadequate roads and infrastructure including port facilities.

A crucial factor permeating this debate is the issue of land rights and the ability to trade these on an open market. But models can be developed which are tailored to the particular requirements of specific countries. The aim should be to strengthen smallholder participation, maximising their opportunities to share in the benefits of commercial agricultural production. In practice, most of these approaches involve partnerships between smallholders and larger plantations with mills.

Developing large-scale plantation agriculture along with the encouragement of co-operatives is not a mutually contradictory strategy. Small-scale farms can co-operate with larger commercial plantations: the latter can buy the output of their smaller neighbours, process it, and brand the finished products. Furthermore, the larger concerns can provide finance for inputs such as fertiliser. Working in co-operation in the appropriate legal framework, and in an environment of stable and predictable property rights, they can help resolve the problems linked to the global food crisis.

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The Institute of Economics Affairs
2 Lord North Street
London SW1P 3LB
Tel 020 7799 8900
email iea@iea.org.uk


Institute of
Economic Affairs